Serial No.: 09/757,012

April 24, 2006

Page 2

Filed: January 8, 2001

1-8 (canceled).

9. (currently amended) A computer-implemented method for generating a gain adjust signal to establish an audio output level, comprising:

receiving at least one person-microphone position signal representative of a position of a person relative to a microphone;

determining a gain adjust signal based at least in part on the person-microphone position signal; and

using the gain adjust signal to establish the audio output level, wherein the person-microphone position signal is recorded, then the gain adjust signal is determined after a recording of the person, the gain adjust signal being used, after completing recording of a video stream, to adjust audio related to the video stream at a playback time subsequent to completing recording of the video stream.

10. (previously presented) A computer-implemented method for generating a gain adjust signal to establish an audio output level, comprising:

receiving at least one person-microphone position signal representative of a position of a person relative to a microphone;

determining a gain adjust signal based at least in part on the person-microphone position signal; and

Serial No.: 09/757,012

April 24, 2006

Page 3

PATENT

Filed: January 8, 2001

using the gain adjust signal to establish the audio output level, wherein the gain adjust signal is a fast response gain adjust signal, and the method further comprises determining a slow response

gain adjust signal based on an audio stream.

11. (currently amended) A digital processor programmed to undertake logic for dynamically

establishing a gain of an audio system, the logic including:

receiving a video stream representative of at least one person and at least one microphone;

deriving person-microphone position signals using the video stream; and

using at least some of the person-microphone position signals, generating audio gain adjust

signals for input thereof to the audio system;

recording at least one calibration person-microphone position signal;

recording at least one calibration audio level contemporaneously with the calibration person-

microphone position signal; and

using the calibration signal and calibration level, generating at least one mapping correlating

head orientations to respective gain adjust percentages.

12. (original) The digital processor of Claim 11, wherein the logic further includes determining

an audio gain adjust signal based at least partially on: a distance from a person's mouth to a microphone, or

an orientation of a person's head relative to the microphone.

13. (canceled).

Serial No.: 09/757,012

April 24, 2006

Page 4

Filed: January 8, 2001

PATENT

14. (currently amended) The digital processor of Claim 1[[3]], wherein the logic further

comprises using the mapping to generate at least one gain adjust signal based on at least one person-

microphone position signal.

15. (original) The digital processor of Claim 11, wherein the gain adjust signal is determined

contemporaneously with recording the person.

16. (original) The digital processor of Claim 11, wherein the person is recorded, then the gain

adjust signal is determined after the recording of the person.

17-29 (canceled).

30. (new) A computer-implemented method for generating a gain adjust signal to establish an

audio output level, comprising:

receiving at least one person-microphone position signal representative of a position of a

person relative to a microphone;

determining a gain adjust signal based at least in part on the person-microphone position

signal; and

using the gain adjust signal to establish the audio output level, wherein the gain adjust signal

is determined based at least partially on at least one of: an orientation of a person's head relative to

the microphone, or a head location relative to a direction of sensitivity of a microphone.

Serial No.: 09/757,012

April 24, 2006

Page 5

PATENT Filed: January 8, 2001

31. (new) The method of Claim 30, wherein the person-microphone position signal is derived

from a video system.

32. (new) The method of Claim 31, further comprising:

recording at least one calibration person-microphone position signal;

recording at least one calibration audio level; and

using the calibration signal and calibration level, generating at least one mapping.

33. (new) The method of Claim 32, further comprising using the mapping to generate at least one

gain adjust signal based on at least one person-microphone position signal.

34. (new) A computer-implemented method for generating a gain adjust signal to establish an

audio output level, comprising:

receiving at least one person-microphone position signal representative of a position of a

person relative to a microphone;

determining a gain adjust signal based at least in part on the person-microphone position

signal; and

using the gain adjust signal to establish the audio output level, wherein the person-microphone

position signal is derived from a motion sensing system.

Serial No.: 09/757,012

April 24, 2006

Page 6

PATENT Filed: January 8, 2001

35. (new) A computer-implemented method for generating a gain adjust signal to establish an audio output level, comprising:

receiving at least one person-microphone position signal representative of a position of a person relative to a microphone;

determining a gain adjust signal based at least in part on the person-microphone position signal; and

using the gain adjust signal to establish the audio output level, wherein the person-microphone position signal is derived from a laser system.

- 36. (new) The method of Claim 30, wherein the gain adjust signal is determined contemporaneously with a recording of the person.
 - 37. (new) An audio system, comprising:

at least one microphone electrically connected to at least one audio amplifier having at least one audio gain;

at least one source of person-microphone position signals representative of at least a head location relative to a direction of sensitivity of the microphone; and

at least one processor receiving signals from the source and establishing the audio gain in response thereto.

38. (new) The system of Claim 37, wherein the source is a video camera.

Serial No.: 09/757,012

April 24, 2006

Page 7

PATENT

Filed: January 8, 2001

39. (new) The system of Claim 37, wherein the source is a motion sensing system of a laser

system or a position sensing system or an orientation sensing system or a distance sensing system.

40. (new) The system of Claim 37, further comprising a slow adjust filter using an audio stream

to generate a slow gain adjust signal.

41. (new) The method of Claim 30, wherein the gain adjust signal is determined by selecting one

of several microphone outputs based on head position.

42. (new) The system of Claim 37, wherein the source is an illumination-based pupil detector.

43. (new) The method of Claim 10, wherein the slow response gain adjust signals adjusts to a

battery voltage decreasing over time.

44. (new) An audio system, comprising:

at least one microphone electrically connected to at least one audio amplifier having at least

one audio gain;

at least one video camera; and

at least one processor receiving signals from the video camera and establishing the audio gain

in response thereto, the audio gain adjust signal being determined as being one plus the sine of the

angle between the head of a person and the microphone.

Serial No.: 09/757,012 April 24, 2006

Page 8

PATENT Filed: January 8, 2001

45. (new) An audio system, comprising:

at least one microphone electrically connected to at least one audio amplifier having at least one audio gain;

at least one video camera; and

at least one processor receiving signals from the video camera and establishing the audio gain in response thereto, the audio gain adjust signal being determined as an inverse function of the square of the distance from the head of a person to the microphone.